

What is claimed is:

1. A backwash, flushing filter assembly comprising:

a header assembly wherein the header assembly includes a cylinder cap, a cylinder base with threaded connector means disposed within the interior circumference of the cylinder base, a fluid inlet connect and a filtered fluid outlet connect;

a rotatable valve assembly which is slidably connected to the header assembly wherein the rotatable valve assembly includes an interior chamber with a backwash fluid inlet port, a filtered fluid outlet port, and at least one seal gasket;

a filter element assembly which is releasably connected to the rotatable valve assembly wherein the filter element assembly includes, a filter stalk with filter ports formed in the filter stalk, and a filter media disposed around the exterior of the filter stalk; and,

a filter housing assembly which is releasably connected to the header assembly wherein the filter housing assembly includes a filter housing and a backwash drain port.

2. The assembly of claim 1 wherein the header assembly and filter housing assemblies are detachably connected via threaded connects.

3. The assembly of claim 1 wherein a set clip is inserted through the cylinder cap and mates to the slot in rotatable valve assembly for releasably securing the rotatable valve assembly and filter element assembly within the filter housing assembly.

4. The assembly of claim 1 wherein the rotatable valve assembly further includes a turn knob and a turn guide slot formed on the exterior circumference of the rotatable valve assembly.

5. The assembly of claim 1 wherein the rotatable valve assembly further includes a top filter coupler.

6. The assembly of claim 1 wherein the filter element assembly further includes a lower filter coupler.
7. The assembly of claim 1 wherein wherein the filter stalk is releasably connected to the rotatable valve assembly via the top filter coupler by locking pins.
8. The assembly of claim 1 wherein wherein the upper end of the filter stalk is releasably connected to the rotatable valve assembly via the tip filter coupler by locking tabs.
9. The assembly of claim 1 wherein the lower end of the filter stalk is releasably connected to the lower filter coupler.
10. The assembly of claim 1 wherein the lower filter coupler includes a gasket stem.
11. The assembly of claim 10 wherein a gasket seal is placed around the gasket stem of the lower filter coupler and detachably secured thereto by a gasket cap.
12. The assembly of claim 10 wherein the lower filter coupler gasket stem and gasket cap are releasably connected via threaded means.
13. The assembly of claim 1 wherein the filter stalk ports are formed circular shape slots in the filter stalk.
14. The assembly of claim 1 wherein the filter stalk ports are formed rectangular slots in the filter stalk.
15. The assembly of claim 1 wherein a removable set clip detachably secures the filter housing with the rotatable valve assembly.

16. A method for backwashing an inline filter assembly comprising the steps of:

providing the filter assembly of claim 1;

directing a fluid into the filter assembly;

filtering the fluid through a filter media disposed on the exterior surface of a filter stalk;

5 turning the rotatable valve assembly which results in the reversal of fluid flow through the filter stalk;

removing the debris on the filter media and at the bottom of the filter housing assembly via the backwash drain port.

17. The method of claim 16 wherein initiating the backwash operation is accomplished by a one-quarter turn of the rotatable valve assembly.

18. The method of claim 16 wherein the filter element assembly is separated from contact with the lower filter coupler gasket seal and the collected solids are removed via the backwash drain port during the backwash operation.

19. The method of claim 16 wherein the backwash operation is terminated by turning the rotatable valve assembly by an opposite one-quarter turn resulting in the resumption of filter operation.

20. A backwash, flushing filter assembly comprising:

a header assembly wherein the header assembly includes a cylinder cap, a cylinder base with threaded connector means disposed within the interior circumference of the cylinder base, a fluid inlet connect, a filtered fluid outlet connect and a removable set clip;

5 a rotatable valve assembly which is slidably connected to the header assembly wherein the rotatable valve assembly includes an interior chamber with a backwash fluid inlet port and a filtered fluid outlet port, a top filter coupler and a turn guide slot;

a filter element assembly which is releasably connected to the rotatable valve assembly wherein the filter element assembly includes a lower filter coupler, a filter stalk with filter ports
10 formed in the filter stalk, and a filter media disposed around the exterior of the filter stalk; and,

a filter housing assembly which is releasably connected to the header assembly wherein the filter housing assembly includes a filter housing and a backwash drain port.

21. The assembly of claim 20 wherein the removable set clip is inserted through a preformed slot in the cylinder cap thereby securing the rotatable valve assembly and filter element assembly within the filter housing assembly.

22. The assembly of claim 21 wherein as the rotation of the rotatable valve assembly results in the axial movement of the rotatable valve assembly and filter element assembly.

23. The assembly of claim 20 wherein rotation of the rotatable valve assembly reverses the direction of fluid flow through the filter.

24. The assembly of claim 20 wherein the rotation of the rotatable valve assembly reverses the direction of fluid flow through the filter assembly and flushes the collected solids from the bottom of the filter housing assembly.

25. The assembly of claim 20 wherein the lower filter coupler includes preformed slots on the

exterior surface of the lower filter coupler to assist in the capture of accumulated solids.

26. The assembly of claim 20 wherein the lower filter coupler is removably connected to the filter stalk.

27. A method for replacing an online filter element assembly comprising the steps of:
removing a set clip from a header assembly;
pulling a filter element assembly out of a filter assembly;
replacing the filter media; and,
5 inserting the filter element assembly into the filter assembly; and,
inserting the set clip into the header assembly.

28. The method of claim 27 wherein the replacement of the filter element assembly is accomplished without detaching the filter assembly from an influent pipe.

29. The method of claim 27 wherein the replacement of the filter element assembly is accomplished without detaching the filter assembly from an effluent pipe.

30. The method of claim 27 wherein the replacement of the filter element assembly is accomplished without detaching the filter assembly from a backwash drain pipe.

31. The method of claim 27 wherein the filter media includes the filter stalk.